HYBRI-FLEX™ ADVANCED NMP PERFORMANCE EV

The following information is to be used as a guideline for the installation of the Hybri-Flex Advanced NMP Performance EV flooring system. Contact the Sherwin-Williams Technical Service Department for assistance prior to application.

APPLICATION INFORMATION – SURFACE PREP PROFILE CSP 4-6

VOC MIXED	APPLICATION STEP	MATERIAL	MIX RATIO	THEORETICAL COVERAGE	PACKAGING
0 g/L 0	Optional Cove Base	Poly-Crete® TF Plus Poly-Crete® WR	A, B & C unit A, B & C unit	180 linear ft @ 6” 25 linear ft/6” cove	0.80 gal unit 2.2 gal unit
0 g/L	Optional Primer	Poly-Crete TF Plus	A, B & C unit	90 sq ft/unit	0.80 gal unit
0 g/L	Moisture Tolerant Build Coat -Slurry	Poly-Crete MD	A, B & C unit	32 sq ft/unit	4.3 gal/unit
0	Broadcast (Standard)	5310 Dry Silica Sand 20-40 Mesh	N/A	1 lb/sq ft	50 lbs
<50 g/L	Grout Coat	MPE	2:1	100 sq ft/gal	3, 15, 165 or 750 gal
<100 g/L	NMP Resistant Topcoat	HPS 100	Pre-measured kit	500 sq ft/gal	0.94 or 4.7 gal
<100 g/L	NMP-, Slip and Abrasion Resistant Topcoat	HTS 100	Pre-measured kit	500 sq ft/gal	1.09 or 5.5 gal

INSTALLATION

The following information is to be used as a guideline for the installation of the Hybri-Flex Advanced NMP Performance EV System. Contact the Sherwin-Williams Technical Service Department for assistance prior to application.

SURFACE PREPARATION – GENERAL

Sherwin-Williams systems can be applied to a variety of substrates if the substrate is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate, such as wood, concrete block, quarry tile, etc. Should there be any questions regarding a specific substrate or condition, please contact the Sherwin-Williams Technical Service Department prior to starting the project. Refer to Surface Preparation (Form G-1).

SURFACE PREPARATION – CONCRETE

Concrete surfaces shall be abrasive blasted to remove all surface contaminants and laitance. The prepared concrete shall have a surface profile equal to CSP 4-6. Refer to Form G-1. Consult the Sherwin-Williams Technical Service Department if oil or grease is present.

After initial preparation has occurred, inspect the concrete for bug holes, voids, fins and other imperfections. Protrusions shall be ground smooth while voids shall be filled with a Sherwin-Williams system filler.

For recommendations, consult the Sherwin-Williams Technical Service Department.

LIMITATIONS

The substrate must be structurally sound and cleaned of any foreign matter that will inhibit adhesion. Do not apply in temperatures below 60°F, above 85°F or when relative humidity is greater than 80 percent. If substrate is not concrete, wood or metal as described in Surface Preparation (Form G-1), then do not apply. Call the Sherwin-Williams Technical Service Department for recommendation. Working time is reduced with air movement and high humidity. When installing Poly-Crete MD, if encountering concrete outgassing, please discontinue installation and apply 3477 Epoxy Water Emulsion Primer/Sealer. Allow to dry until tack-free and proceed with the Hybri-Flex Advanced NMP Performance EV System installation.

- Do not featheredge.
- Do not mix partial units.
- Do not hand mix. Do not let mixed material sit in a bucket, even a two- to three-minute minute delay in pouring will reduce working time.
- To install outside, contact the Sherwin-Williams Technical Service Department.

Full chemical resistance is achieved after a seven-day cure. Consult the Sherwin-Williams Technical Service Department for specific chemical resistance.

If using without broadcast media, primer is required.

OPTIONAL COVE BASE

MIXING AND APPLICATION

Cove base should be installed prior to the floor. Tape out cove with duct tape or a good quality masking tape. Terrazzo strips will also work.

PRIMER: ADD POLY-CRETE

TF Plus resin to a 2-gallon mixing pail. Be sure to scrape the sides and bottom of the container with a mix stick. Add Poly-Crete® TF Plus hardener and scrape out the container. Blend the resin and hardener with a drill and a 4" dispersion blade for 20 seconds. Continue to mix slowly and add Poly-Crete TF Plus aggregate to the mixing pail. Mix for 1 minute. Use a disposable brush to paint a thin coat of the mixture onto the wall and 1" out onto the floor. One kit will yield 180 LF.

Note: Re-prime if the primer becomes tack-free before applying the cove matrix. Primer will stay tacky for 30 min @ 70°F

MIXING: Do not mix partial units, the fine aggregate and pigment can and will separate. A drill and a paddle work the best, but a KOL mixer works well also. Mix Part A with Part B. Slowly add aggregate and mix until thoroughly wet out. Immediately pour mixed material out of bucket, in a bead, next to the wall. Rough apply cove mortar using a trowel. Do not worry about trowel marks at this time; just get all the mixed material applied to the wall. Material will need to be finished within approximately 20 minutes depending on temperature. Placing a portable shop light next to cove base will cast shadows and assist on finishing the cove base with minimal waves and/or trowel marks. Use a minimum of a 3/4-inch radius cove trowel and finish cove base. Any smaller may result in a loss of the radius once the floor is tied in. Lightly misting cove trowel with window cleaner, as a trowel lube, works well. Do not use isopropyl alcohol. Carefully remove tape and finish rough edges. Install floor once cove is hard to the touch, about two-and-half to three hours.

REQUIRED TOOLS:
Drill, proper mixing paddle, 3-inch by 8-inch trowel works best to apply, margin trowel, and a radius cove trowel. Minimum of 3/4-inch but 1-inch is preferred.

PRIMER – OPTIONAL

MIXING AND APPLICATION

Add Poly-Crete TF Plus resin to a 2-gallon mixing pail. Be sure to scrape the sides and bottom of the container with a mix stick. Add Poly-Crete TF Plus hardener and scrape out the container. Blend the resin and hardener with a drill and a 4" dispersion blade for 20 seconds. Continue to mix slowly and add Poly-Crete TF Plus aggregate to the mixing pail. Mix for 1 minute. Use a disposable brush to paint a thin coat of the mixture onto the wall and 1" out onto the floor. One kit will yield 90 sq ft.

MOISTURE TOLERANT BUILD COAT AND BROADCAST – POLY-CRETE® MD

MIXING AND APPLICATION

Poly-Crete MD is applied by "Pin Rake" or 1/2" V-notched trowel or cam rake or "trowel method", and is typically applied at a thickness of 3/16". With broadcast and topcoat, Poly-Crete® MD has a finished nominal system thickness of 1/4".

A. Poly-Crete MD is supplied in pre-measured units consisting of one pail of resin, one pail of hardener and one bag of aggregate (powder) - a mixed kit yields ~32 sq ft of coverage. Pour resin into a 5-gallon pail; scrape bottom and sides to assure that all pigment is transferred. The resin and hardener should be pre-blended for approximately 30 seconds. A Bird Cage mixer is not recommended for this product, however a low speed <500 rpm high torque power drill and a 5-inch spiral mixing blade may be used. Gradually add aggregate until a homogeneous mix is attained. (Approximately 1 minute) **THOROUGH BLENDING IS MANDATORY**. A properly mixed batch applies easier and has a uniform surface appearance. Incomplete mixing will cause an inconsistent finish or possible blistering. To avoid irregular curing or blisters, regularly clean the mixing blade and pail to avoid combining fresh material with older batches. Material should be applied directly onto the wet edge immediately after mixing.

B. Pour the entire batch onto the floor and spread with a 24" pin rake set at 1/8" higher than the applied thickness of the screed. For a 3/16" thick floor set rake to 1/4". To avoid transition lines between mixes, it is very important that the material is poured directly onto the wet edge.

C. When applying on level or surfaces sloped up to 1/4"/foot, the product is used as supplied. For more steeply sloped surfaces such as ramps that are up to 3/4"/foot, adding 1 gallon of Q11 (Q-Rok #3) to each mix will prevent sagging while still providing a uniform surface after pin-rolling.

D. Check pin rake every 1,000 sq feet for pin wear. Adjust or have new rake ready to avoid interruption in process.

E. Trowel edges, drains and around equipment supports with an even pressure and a low angle trowel in a sweeping motion to complete troweling. This ensures that new batches of material are blended together with no transition lines for continuity of finish.

F. Immediately roll and then cross roll with a 15/16" spiked roller to eliminate lines and help release air.

G. Spike Rolling must be completed immediately after leveling of material to eliminate any residual roller marks in the finished surface (Within 12 minutes of mixing @ 70°F).

H. The aggregate must be broadcast UP into the air while dispersing evenly and vertically at an approximate rate of 1 pound per sq. ft. into the wet surface. Apply at a rate of two mixes behind the wet edge, ensuring that the surface is completely covered. Broadcasting should be completed within 15 minutes of mixing each batch. Do not spike roller areas that have been broadcast.

GROUT COAT – RESUFLOR MPE

COVERAGE RATE: One gallon of Resuflor™ MPE will cover 100 sq ft at 12 mils wet/dry film.

PREMIX PART A using a Jiffy® mixer blade and slow-speed drill. (This is required for both 3-gallon and full-filled 5-gallon units.)

ADD RESUFLOR MPE PART B TO PART A (3 GALLONS TOTAL MIX). Pour 1-gallon of Part B into mixing pail. Add 2-gallons of Part A and mix for three minutes. Pour entire mix onto the floor in a ribbon. Spread resin with a flat blade squeegee. Back the resin with a 3/8" nap roller for a smooth uniform appearance. Backrolling is required to remove puddles and squeegee lap marks in order to obtain a consistent mil thickness, unform texture and appearance. **POTLIFE:** Mix only enough material that can be applied within the work time (time between the addition of Part B to Part A and the completion of all application actions). Check the following chart for work times at various temperatures.

For smaller quantities, use two parts PART A to one part PART B by volume.

APPROXIMATE WORK TIME

65°F	70°F	73°F	80°F	90°F
40 min	30 min	25 min	20 min	15 min

COLORS: Premix colorants to ensure uniform color. Colorant is added at the rate of one unit per 3-gallon mix.

NOTE: When using colorant in the bulk units, add the colorant to the Part A that has been measured into the "mixing pail."

If Resuflor MPE is topcoated with Resutile™ HTS 100 at floor temperatures of 65°F-90°F, it does not need to be sanded if applied within 24 hours.

If epoxy is not coated within 24 hours, it must be sanded with 80-grit paper. The use of more aggressive paper will introduce deep grooves that will not be covered by a single, thin coat of urethane; swirl marks will be particularly evident in a topcoat that is glossy. We recommend thorough sanding with a swing-type buffer so that multiple scratch marks cause an obvious gloss loss on all areas (depressions will remain shiny), and the floor is uniformly dulled. The ability to see individual scratch marks is an indication that sanding is not adequate. Scrub with detergent and rinse with clean water before coating and tack rag to remove fine dust.

NMP RESISTANT TOPCOAT – RESUTILE™ HPS 100

PREMIX PART A FOR THREE MINUTES USING A JIFFY MIXER BLADE with slow-speed drill. **POTLIFE:** Mix only enough that can be used in a two-hour period. **NOTE:** Once opened, this material cannot be resealed for later use.

COLORS: Premix Sherwin-Williams colorant before adding to Resutile HPS 100 to ensure uniform color. Add colorant to Resutile HPS 100 Part A.

ADD PART B while mixing.

MIX FOR THREE MINUTES using a Jiffy mixer blade and slow-speed drill. Pour into application tray.

APPLY RESUTILE HPS 100 at the rate of 500 sq ft/gallon with a 3/8-inch nap roller. For proper appearance and development of physical properties, it is crucial that material is not applied above or below this rate. Dip the roller in the coating and lightly roll out excess in the application tray. Apply two 8- to 10-foot-long paths on the concrete, making one stroke left to right and one right to left. Rewet the roller and apply two more paths adjacent to the first pair. Rewet the roller and apply a third pair adjacent to the second.

SPREAD THE MATERIAL evenly with V-shaped cross passes.

MAKE SURE THE FLOOR HAS JUST ENOUGH COATING TO COVER EVENLY. Excess material could cause the floor to blister, especially in high humidity. Insufficient material will cause the floor to look non-uniform.

LEVEL THE AREA with straight passes that cross the initial material paths. These final strokes will reduce roller marks. If the appearance is not satisfactory, reroll the area.

ALLOW COATING TO DRY 24 HOURS at 75°F, 50 percent relative humidity before opening to light traffic. Allow more time at low temperatures, low humidity or for heavier traffic.

NMP- , SLIP- AND ABRASION RESISTANT TOPCOAT – RESUTILE HTS 100

PREMIX PART A FOR THREE MINUTES USING A JIFFY® MIXER BLADE with slow-speed drill. **POTLIFE:** Mix only enough that can be used in a two-hour period. **NOTE:** Once opened, this material cannot be resealed for later use.

COLORS: Premix colorant before adding to Resutile HTS 100 to ensure uniform color. Add colorant to Resutile HTS 100 Part A and mix using a Jiffy® mixer blade and slow-speed drill. Use colorants at a rate of one unit per 1-gallon unit of Resutile HTS 100.

POUR PART C INTO PART A while mixing.

CONTINUE TO MIX AND ADD PART B. MIX FOR THREE MINUTES using a Jiffy mixer blade and slow-speed drill. Pour into application tray.

APPLY RESUTILE HTS 100 at the rate of 500 sq ft/gallon with a 3/8-inch nap roller. For proper appearance and development of physical properties, it is crucial that

material is not applied above or below this rate. Dip the roller in the coating and lightly roll out excess in the application tray. Apply two 8- to 10-foot-long paths on the concrete, making one stroke left to right and one right to left. Rewet the roller and apply two more paths adjacent to the first pair. Rewet roller and apply a third pair adjacent to the second.

SPREAD THE MATERIAL evenly with V-shaped cross passes.

MAKE SURE THE FLOOR HAS JUST ENOUGH COATING TO COVER EVENLY. Excess material could cause the floor to blister, especially in high humidity. Insufficient material will cause the floor to look non-uniform.

LEVEL THE AREA with straight passes that cross the initial material paths. These final strokes will reduce roller marks. If the appearance is not satisfactory, reroll the area.

REMIX THE MATERIAL in the tray occasionally (with the roller) to prevent settling of the Part C (filler).

NOTE: When multiple applicators are used to apply material, inconsistencies between areas may result. To ensure a more uniform finish, an individual outfitted with spiked shoes may finish by pushing or pulling a roller across all applicator areas.

ALLOW COATING TO DRY 24 HOURS at 75°F, 50 percent relative humidity before opening to light traffic. Allow more time at low temperatures, low humidity or for heavier traffic. Full coating properties take 14 days to develop.

CLEAN UP

Clean up mixing and application equipment immediately after use. Use toluene or xylene. Observe all fire and health precautions when handling or storing solvents.

SAFETY

Refer to the SDS sheet before use. Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

MATERIAL STORAGE

Store materials in a temperature controlled environment (40°F to 90°F) and out of direct sunlight.

Keep resins, hardeners and solvents separated from each other, and away from sources of ignition.

MAINTENANCE

Occasional inspection of the installed material and
spot repair can prolong system life. For specific information, contact the Sherwin-Williams Technical Service Department.

DISCLAIMER

The information and recommendations set forth in this document are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams.

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THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams High Performance Flooring delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe.

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